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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,969	03/27/2002	Peter Andersen	P01,0218	1295
26574	7590	11/19/2003	EXAMINER	
SCHIFF HARDIN & WAITE 6600 SEARS TOWER 233 S WACKER DR CHICAGO, IL 60606-6473			WRIGHT, ANDREW D	
		ART UNIT	PAPER NUMBER	
		3617		

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/868,969	ANDERSEN, PETER
	Examiner	Art Unit
	Andrew Wright	3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address.

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 06 May 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 23-34 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 23-34 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on 06 May 2003 is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 6/2/03 has been placed in the file. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

2. The proposed drawing corrections submitted 5/6/03 are approved.

### ***Claim Objections***

3. Claims 23, 27, and 30 are objected to. Claim 23 recites "the electrical motor" in lines 10-11. It is understood that this refers to the already recited "electric motor". Consistent terminology should be used. Claim 27 recites "the flooding and freeing of the bottom and side tanks" in line 2. This recitation is improper because it lacks antecedent basis in the claims. It is understood, however, that this refers to ballasting of the tanks, and this will be assumed for examination purposes. Claim 30 has a recitation similar to that of claim 27. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa et al. (US 3,934,530) in view of Pleuger et al. (US 2,714,866) and Breivik et al. (US

5,749,758). Kossa discloses a semi-submersible cargo vessel. The vessel comprises stern portion (16) and bow portion (14). Wheelhouse (32) is at the bow. Planar cargo deck (B) extends from the stern to a forebody. The deck is bounded by forward bulkhead (17), port side (18), and starboard side (19). The deck is free of obstructions within the bounds. The vessel has side ballast tanks (123, 124) and bottom ballast tanks (121, 122). The ballast tanks can be selectively filled or emptied such that the deck can be disposed at a range of positions from above to below the waterline. Kossa is silent as to engines and propellers. Pleuger discloses a device for propelling a ship. The device comprises an azimuth rudder propeller disposed at the stern. The propeller is connected to generator by electric cable (28). The generator is driven by a diesel motor. Pleuger teaches that the generator may be placed at any place in the body of the ship (column 2, lines 11-16). Pleuger teaches that his device provides for efffcieint propulsion of the ship, and allows deep sea ships to be maneuvered in narrow waters. Breivik teaches that an engine room with the diesel electric main machinery can be placed below the wheelhouse at the bow of a ship (column 3, lines 19-22). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kossa by using an electric azimuth propeller, generator, and diesel engine as taught by Pleuger, and to place the diesel engine in an engine room under the wheel house at the bow of the ship as taught by Breivik. The motivation would be to optimize component layout of the vessel.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger and Breivik as applied to claim 23 above, and further in view of Salmi et

al. (US 5,403,216). Kossa in view of Pleuger and Breivik does not disclose a double propeller. Salmi discloses an azimuth rudder propeller similar to that of Pleuger. Salmi discloses that the propeller can be either one propeller (figure 6) or two propellers (figure 7). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Kossa by using a double propeller. The motivation would be to improve propulsive efficiency as taught by Salmi (column 7, lines 19-21).

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger, Breivik, and Salmi as applied to claim 24 above, and further in view of O'Brien Jr. (US 4,114,555). Breivik and Salmi each show bow thrusters. Kossa in view of Pleuger, Breivik, and Salmi does not specifically disclose bow thrusters that are electrically driven. O'Brien shows a ship's propulsion system where the main propellers and a bow thruster are all electrically driven from diesel engine generators. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Kossa by adding an electric bow thruster. The motivation would be to improve maneuvering, as is well known in the art.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified invention of Kossa in view of Pleuger, Breivik, Salmi, and O'Brien Jr. as applied to claim 25 above, and further in view of Nagafusa (US 5,318,466). Kossa in view of Pleuger, Breivik, Salmi, and O'Brien Jr. does not disclose the bow-thruster can be controlled from either the wheelhouse and from bridge side wings. Nagafusa shows a ship with a main helm and a remote helm. Such arrangements are well known and

provide the operator the flexibility of maintaining control of the ship from different locations of the ship. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing a remote helm for the bow thruster. The motivation would be to allow the operator to control the ship from various locations on the ship, such as during cruising or docking.

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified invention of Kossa in view of Pleuger, Breivik, Salmi, O'Brien Jr., and Nagafusa as applied to claim 26 above, and further in view of McClure (US 3,894,503). Kossa in view of Pleuger, Breivik, Salmi, O'Brien Jr., and Nagafusa does not disclose the ballasting is controlled from a control console in the wheelhouse. It is well known to provide a central control for the entire ship's ballast system in the wheelhouse so that the operator can control the trimming of the ship. McClure shows a barge with a control tower (28) from which various barge activities are directed. The control tower is similar in function to a wheelhouse. McClure discloses that the control room of the control tower (28) is provided with a main ballast control console for remotely operating the ballast pumps and their associated valves. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing a ballast control console in the wheelhouse. The motivation would be to allow remote operation of the ballast system by the operator in the wheelhouse.

10. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger and Breivik as applied to claim 23 above, and further in view of O'Brien

Jr. (US 4,114,555). Breivik shows bow thrusters (17). Kossa in view of Pleuger and Breivik does not specifically disclose bow thrusters that are electrically driven. O'Brien shows a ship's propulsion system where the main propellers and a bow thruster are all electrically driven from diesel engine generators. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Kossa by adding an electric bow thruster. The motivation would be to improve maneuvering, as is well known in the art.

11. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified invention of Kossa in view of Pleuger, Breivik, and O'Brien Jr. as applied to claim 28 above, and further in view of Nagafusa (US 5,318,466). Kossa in view of Pleuger, Breivik, and O'Brien Jr. does not disclose the bow-thruster can be controlled from either the wheelhouse and from bridge side wings. Nagafusa shows a ship with a main helm and a remote helm. Such arrangements are well known and provide the operator the flexibility of maintaining control of the ship from different locations of the ship. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing a remote helm for the bow thruster. The motivation would be to allow the operator to control the ship from various locations on the ship, such as during cruising or docking.

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified invention of Kossa in view of Pleuger and Breivik as applied to claim 23 above, and further in view of McClure (US 3,894,503). Kossa in view of Pleuger and Breivik does not disclose the ballasting is controlled from a control console in the wheelhouse.

It is well known to provide a central control for the entire ship's ballast system in the wheelhouse so that the operator can control the trimming of the ship. McClure shows a barge with a control tower (28) from which various barge activities are directed. The control tower is similar in function to a wheelhouse. McClure discloses that the control room of the control tower (28) is provided with a main ballast control console for remotely operating the ballast pumps and their associated valves. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing a ballast control console in the wheelhouse. The motivation would be to allow remote operation of the ballast system by the operator in the wheelhouse.

13. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger and Breivik as applied to claim 23 above, and further in view of Mantere (US 5,827,095). Kossa in view of Pleuger and Breivik does not disclose that the engines have sound dampeners. Mantere shows a ship's diesel engine arrangement where the engine is mounted on a damped base. The damped base constitutes a sound dampener. The motivation for such an arrangement is well known: to attenuate vibration and noise that is transmitted from the engine the ship's structure for the purpose of reducing fatigue wear on ship structure and to reduce annoyance of crew. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing vibration-dampening bases for all of the engines.

14. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger and Breivik as applied to claim 23 above, and further in view of Honour (US 4,170,551). Kossa in view of Pleuger and Breivik does not disclose that the main diesel engines operate with heavy oil having a viscosity of approximately 3500 seconds Redwood. Honour discloses a cargo ship that utilizes a slow-speed diesel engine that operates with high viscosity 3500 seconds Redwood fuel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by using such an engine. The motivation would be to utilize an engine that is known to perform well in cargo vessels, and that can be adapted to use with the waste oil recovery unit disclosed by Honour.

15. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger and Breivik as applied to claim 23 above, and further in view of O'Brien Jr. (US 4,114,555). Kossa in view of Pleuger and Breivik does not disclose auxiliary diesel engines. O'Brien shows a ship's propulsion unit where both the main propeller and the bow thruster are electrically driven, with the powers system comprising main diesel engines and auxiliary diesel engines. It is known in the art to use auxiliary engines to provide power for shipboard electrical systems. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing auxiliary diesel engines. The motivation would be to have a modular system where the drive engines power solely the drive generators and the auxiliary engines support other ship electrical needs. The auxiliary diesel engines would inherently be operated with marine diesel oil.

16. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossa in view of Pleuger, Breivik, and O'Brien as applied to claim 33 above, and further in view of Mantere (US 5,827,095). Kossa in view of Pleuger, Breivik, and O'Brien does not disclose that the auxiliary machines are installed on a vibration-dampened base. Mantere shows a ship's diesel engine arrangement where the engine is mounted on a damped base. The damped base constitutes a sound dampener. The motivation for such an arrangement is well known: to attenuate vibration and noise that is transmitted from the engine the ship's structure for the purpose of reducing fatigue wear on ship structure and to reduce annoyance of crew. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Kossa by providing vibration-dampening bases for all of the engines.

***Response to Arguments***

17. Applicant's arguments with respect to claims 23-34 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wells (US 3,587,505) shows a submersible cargo carrier. Cushing et al. (US 3,823,681) shows a submersible cargo carrier.

20. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax number for official communications is 703-872-9306. The fax number directly to the examiner for unofficial communications is 703-746-3548.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist at (703) 308-1113.

Andrew D. Wright  
Patent Examiner  
Art Unit 3617

*[Handwritten Signature]* 11/12/03

*[Handwritten Signature]*  
S. JOSEPH MORANO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600